

# Annual Mammal Survey 2002

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## **Abstract**

Annual mammal surveys are used as an index to species abundance. For the 2002 Annual Mammal Survey, numbers of bobcats, coyotes, fisher, and gray wolves per respondent were above long-term averages. Numbers of badger, black bear, gray fox, jack rabbits, river otters, American martens, and red fox per respondent were below long-term averages. Long-term averages represent observations over the fifteen-year period of 1987-2001. Additionally, responses by field personnel in the 2002 Annual Mammal Survey decreased 25% from the 2001 level.

## **Methods**

Wildlife Survey materials were sent to regional land leaders with the instruction to distribute the survey forms to all field personnel in their region. The annual Mammal Survey was sent out with the Ten-Week Brood Survey. Field personnel were asked to record the number of ten mammal species, namely, American martens, badgers, black bears, coyotes, fishers, gray foxes, gray wolves, jack rabbits, river otters, and red foxes, observed by them while doing normal field operations during the past year. Field personnel were asked to report live sightings as well as road kills. All species have appeared on the annual mammal survey since 1987 except for gray wolves, which were added in 1997. Numbers per respondent were used because the number of observers changes from year to year. The number of respondents, however, underestimates the number of observers because field personnel did not fill out the survey if they sighted none of the mammals listed. Long-term averages are based on observations from the fifteen-year period of 1987-2001.

## **Results**

One hundred forty one (141) surveys contained observations of mammals in 2002. Since 1987, respondents have averaged 199 surveys per year. The number of surveys returned in 2002 represents a 25% decrease from the 2001 response of 187 surveys and a 29% decrease from the average long-term participation level.

### **American Marten**

One American marten live sighting was observed in 2002 in Iron County; no road kills were reported. Since 1987, on average, 2.4 American martens have been observed and reported per year. American marten per respondent numbered 0.007 in 2002, which is slightly lower than the long-term average of 0.012 (Figure 1).

### **Badger**

Forty-two field personnel observed 76 badgers. Forty-six (46) observations were live sightings and 30 observations were road kills. Badgers per respondent numbered 0.54 in 2002, which is a 19% decrease from the long-term average of 0.67 (Figure 2).

### Black Bear

Sixty-one field personnel observed 325 black bears in 2002. Three hundred five (305) observations were live sightings and 20 were road kills. Black bears per respondent numbered 2.30 in 2002, which is below the long-term average of 2.43 black bears per respondent (Figure 3). Black bear observations began to increase in 1992 and the number of black bears per respondent stayed above the long-term average until 2002, when it decreased by 5%.

### Bobcat

Fifteen field personnel observed 20 bobcats in 2002. Fifteen (15) observations were live sightings and 5 were road kills. Bobcats per respondent numbered 0.14 in 2002, which is well above the long-term average of 0.09 bobcats per respondent (Figure 4). Bobcat observations per respondent, however, were increasing from 1998-2001 but have decreased 36% in 2002 from 2001 sightings.

### Coyote

Eighty field personnel observed 362 coyotes in 2002. Three hundred (300) were live sightings and 62 were road kills. Coyotes per respondent numbered 2.57, which is an 18% increase from the long-term average of 2.17 coyotes per respondent (Figure 5).

### Fisher

Forty-three personnel observed 163 fishers in 2002. One hundred forty nine (149) were live sightings and 14 were road kills. Fishers per respondent numbered 1.16 in 2002, which is above the long-term average of 0.86 fishers per respondent (Figure 6). Fisher observations per respondent have remained above the long-term average since 1992.

### Gray Fox

Twenty-nine personnel observed 43 gray foxes in 2002. Thirty-one (31) were live sightings and 12 were road kills. The number of gray fox observed per respondent in 2002 was 0.30, compared to the long-term average of 0.43 gray fox per respondent (Figure 7). Gray fox observations dropped well below the long-term average between 1997 and 1999, generally returned to the average from 2000-2001, and dropped below the long-term average by 30% in 2002.

### Gray Wolf

Thirty-seven field personnel observed 78 gray wolves in 2002. Seventy one (71) were live sightings and 7 were road kill. Gray wolves observed per respondent numbered 0.55 in 2002, more than double the long-term average of 0.24 (Figure 8).

### Jack Rabbit

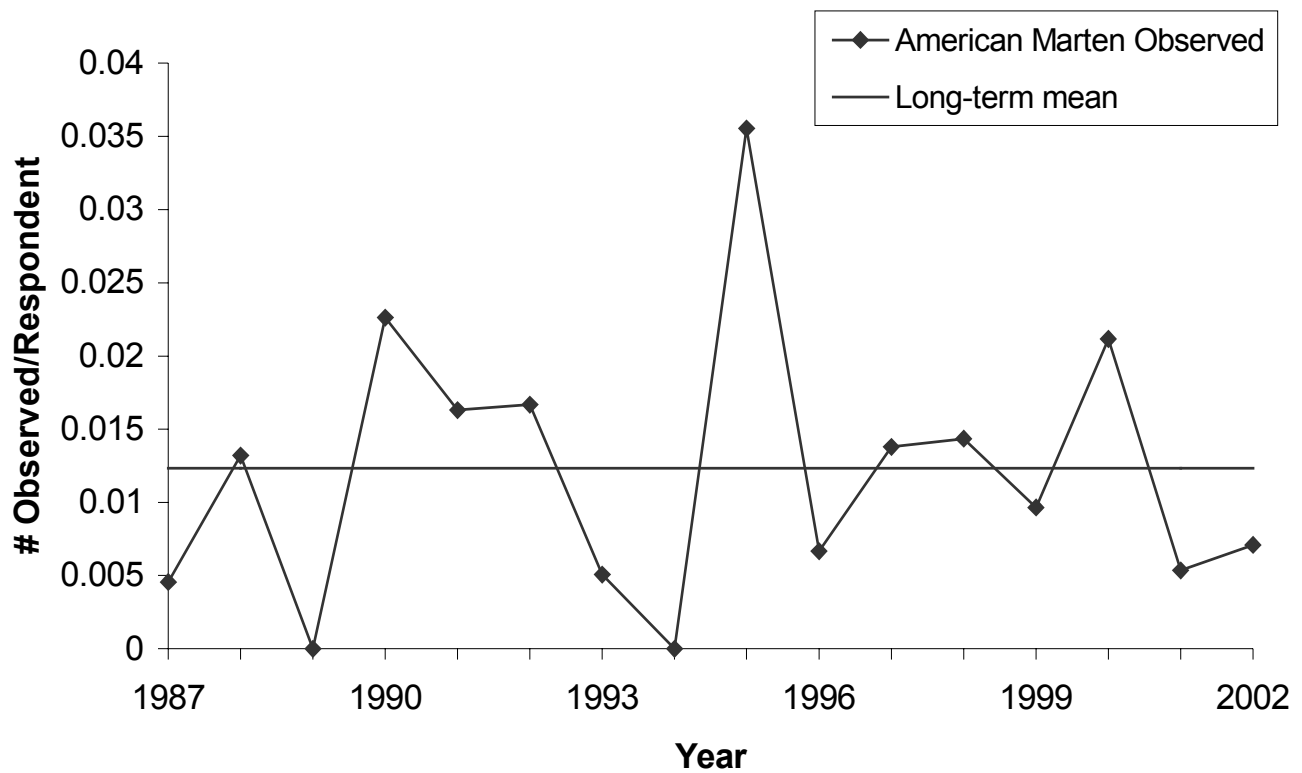
One field personnel observed 3 jack rabbits in 2002. All 3 were live sightings. This single observation represents a 92% decrease in observations from 2001 (38 observations). Observations per respondent numbered 0.02 in 2002 compared to the long-term average of 0.04 jack rabbits observed per respondent (Figure 9).

### River Otter

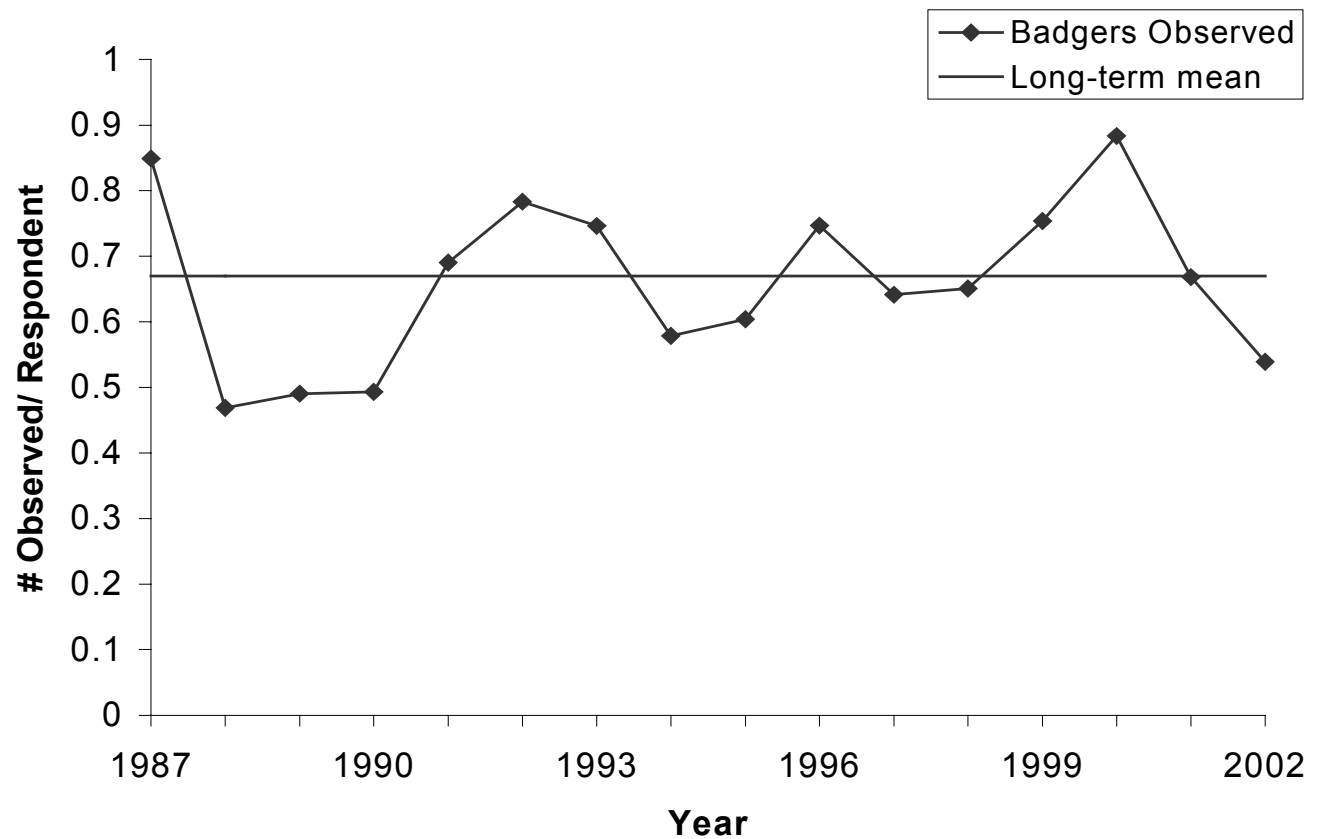
Fifty-one field personnel observed 217 river otters in 2002. Two hundred eight (208) were live sightings and 9 were road kills. River otters observed per respondent in 2002 was 1.54, which is substantially below the long-term average of 2.37 otters per respondent (Figure 10). However, compared to 2001, there was a 1% decrease in observations when 1.56 otters were observed per respondent. Otter observations have been below average since 1998.

### Red Fox

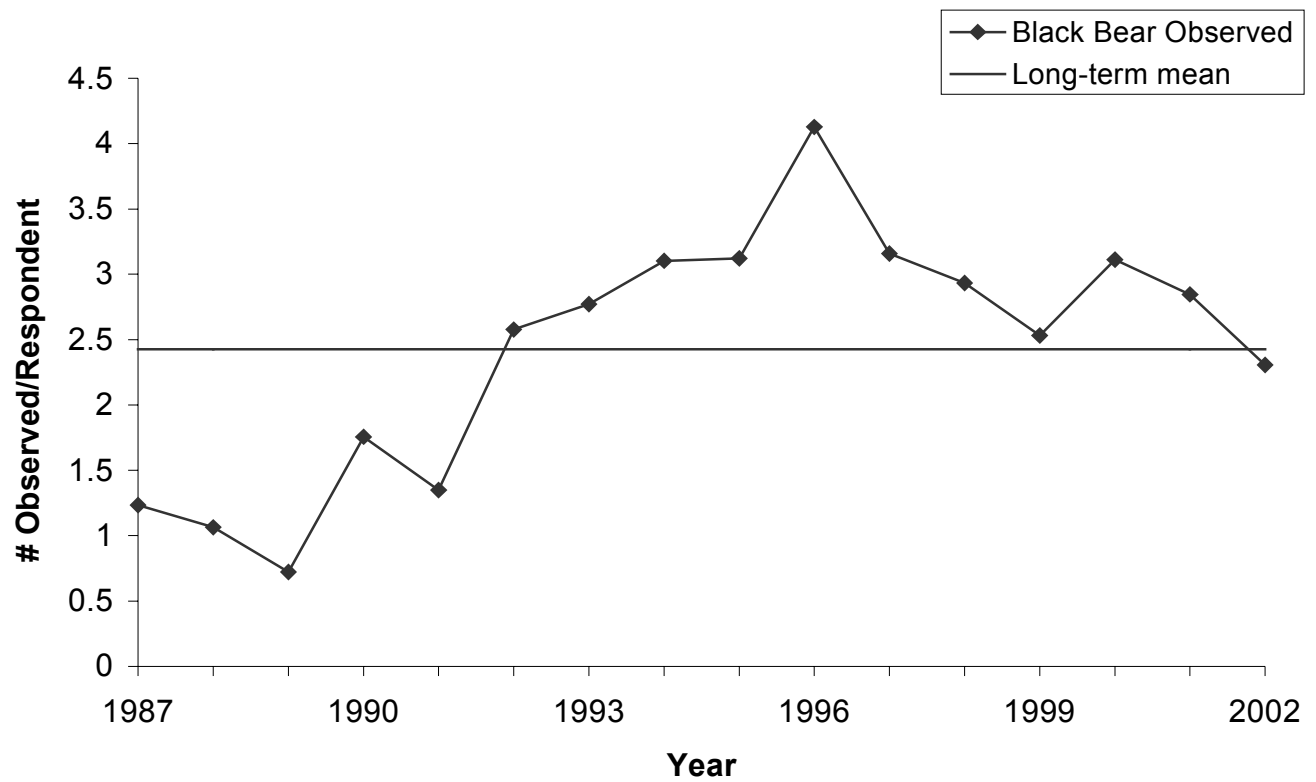
One hundred eight field personnel observed 564 red fox in 2002. Four hundred nine (409) were live sightings and 155 were road kills. Red fox observed per respondent was 4.0 compared to the long-term average of 4.77 red fox per respondent (Figure 11).



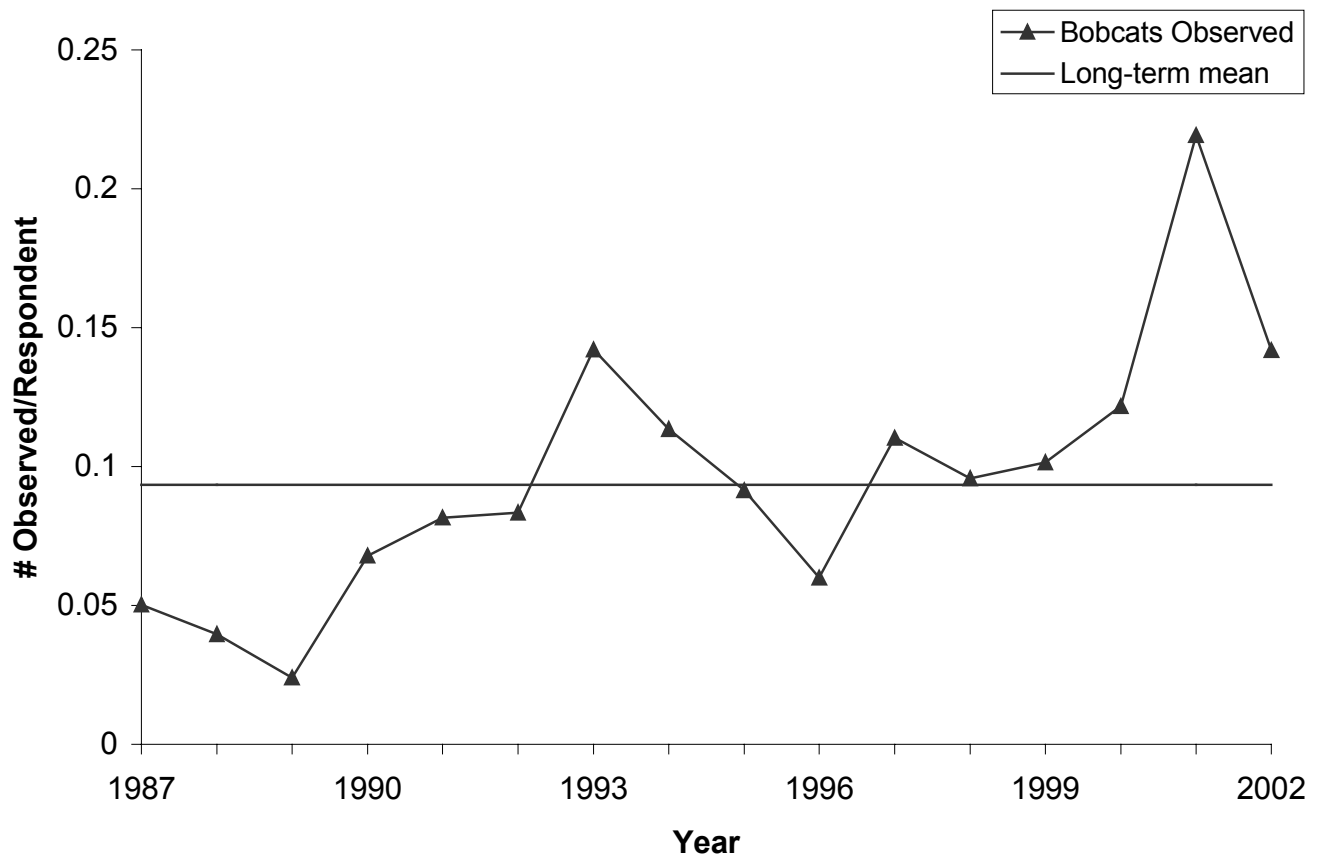
**Figure 1.** Number of American martens seen per respondent 1987-2002.



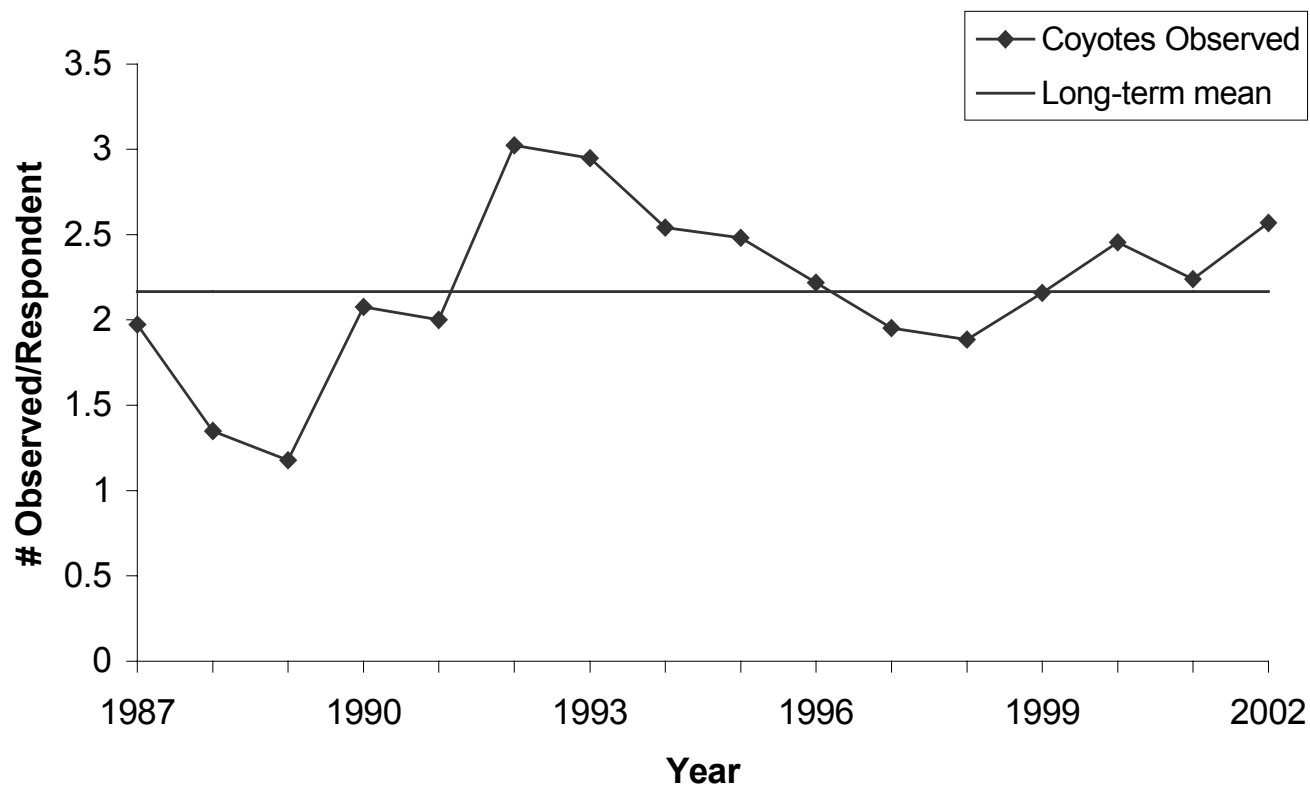
**Figure 2.** Number of badgers seen per respondent 1987-2002.



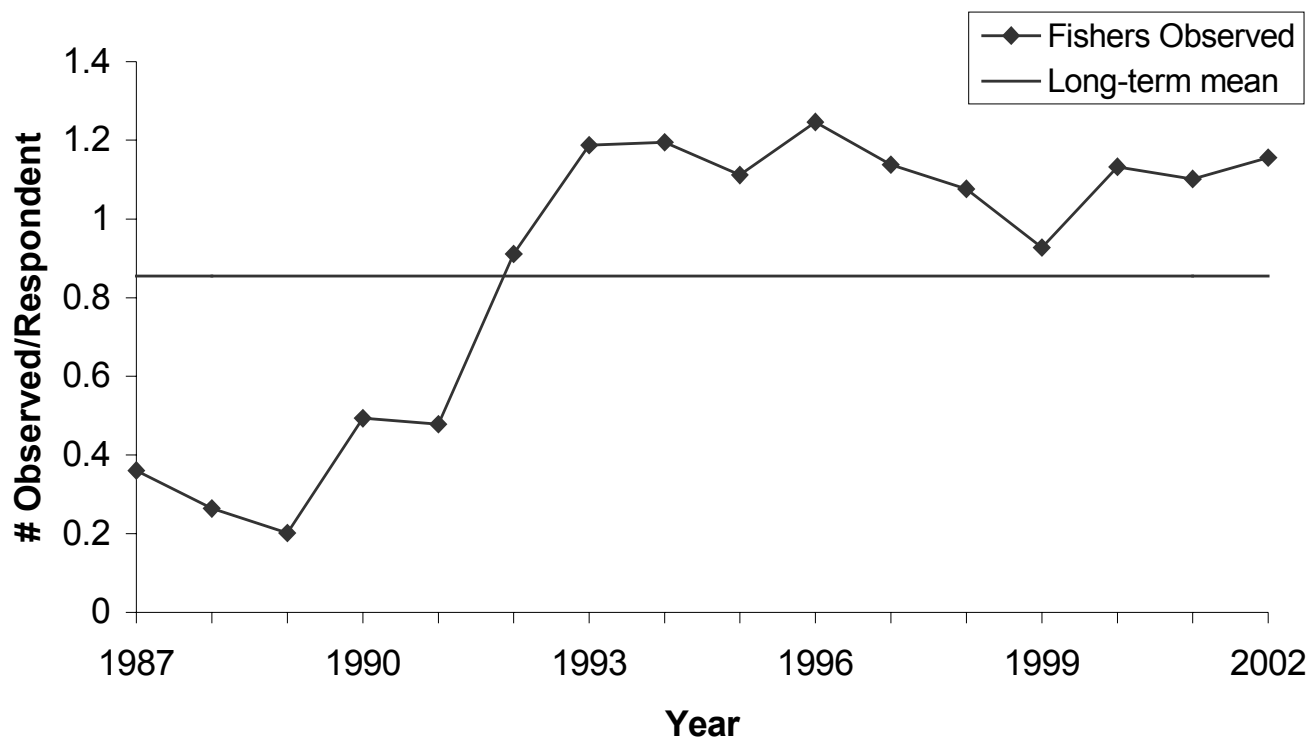
**Figure 3.** Number of black bears seen per respondent 1987-2002.



**Figure 4.** Number of bobcats seen per respondent 1987-2002.



**Figure 5.** Number of coyotes seen per respondent 1987-2002.



**Figure 6.** Number of fishers seen per respondent 1987-2002.

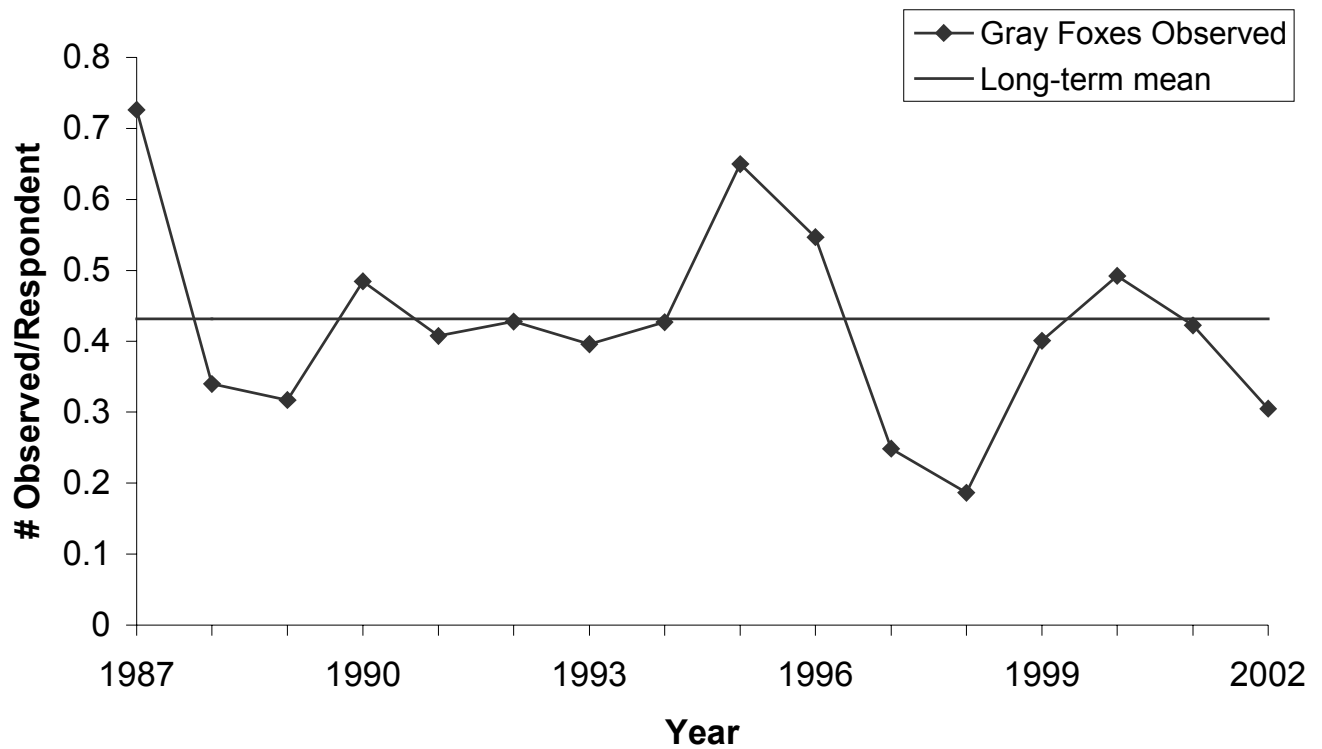


Figure 7. Number of gray foxes seen per respondent 1987-2002.

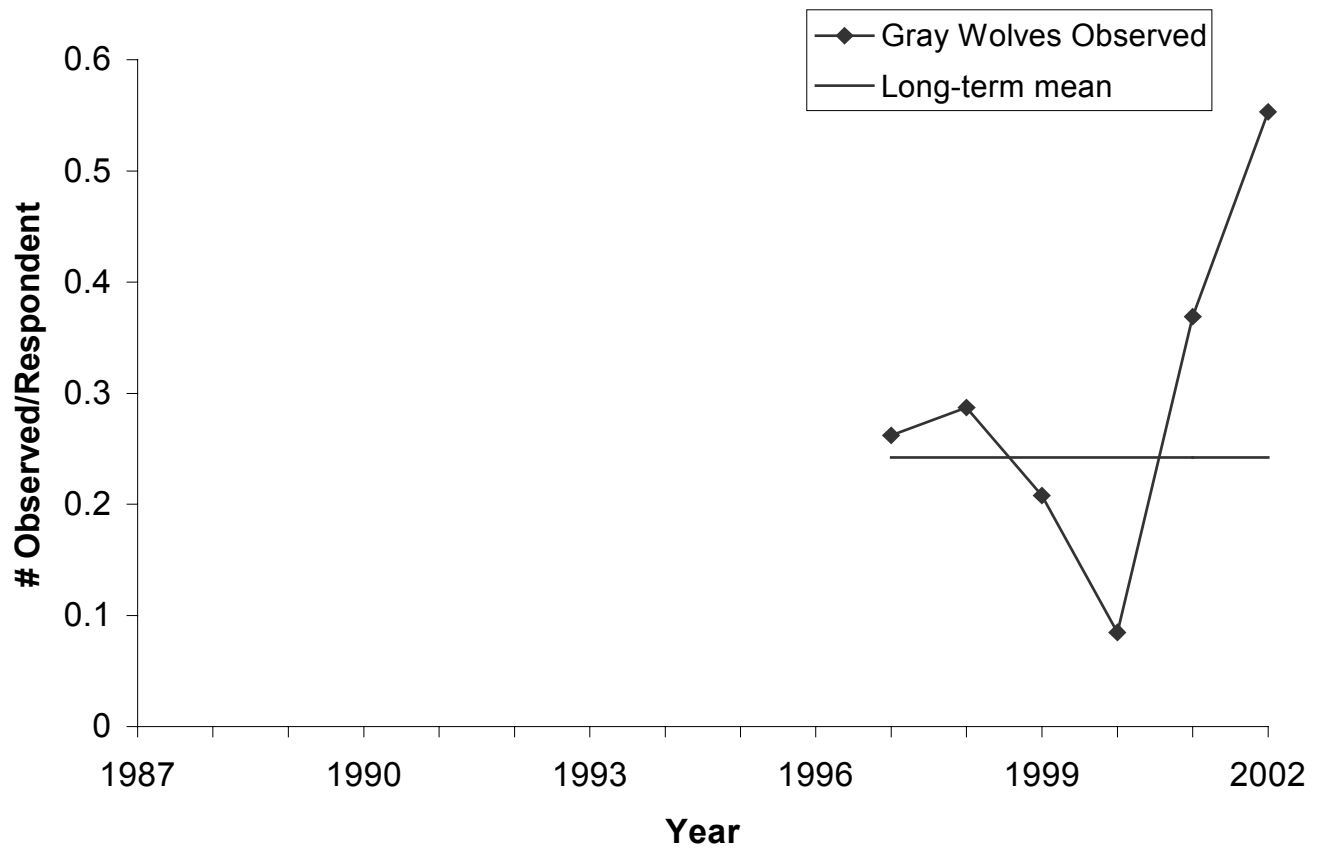
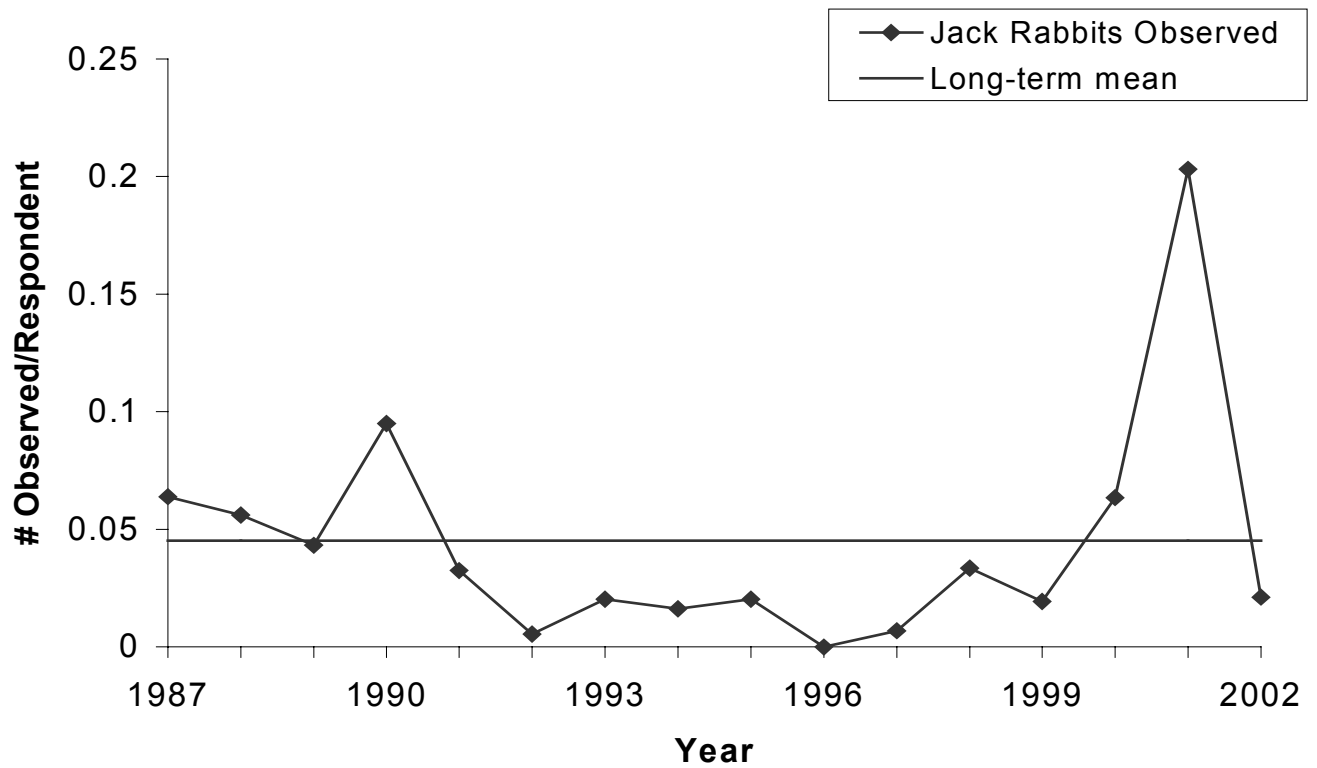
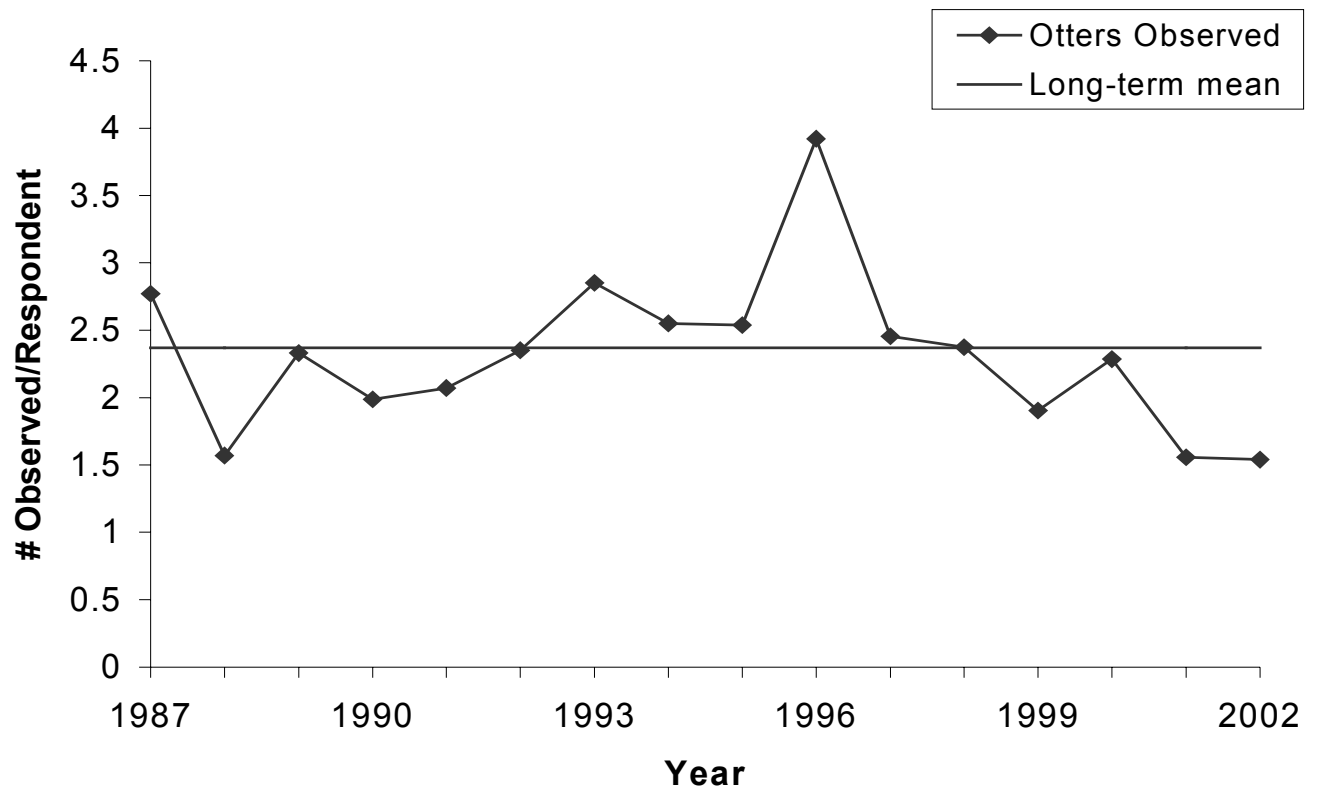


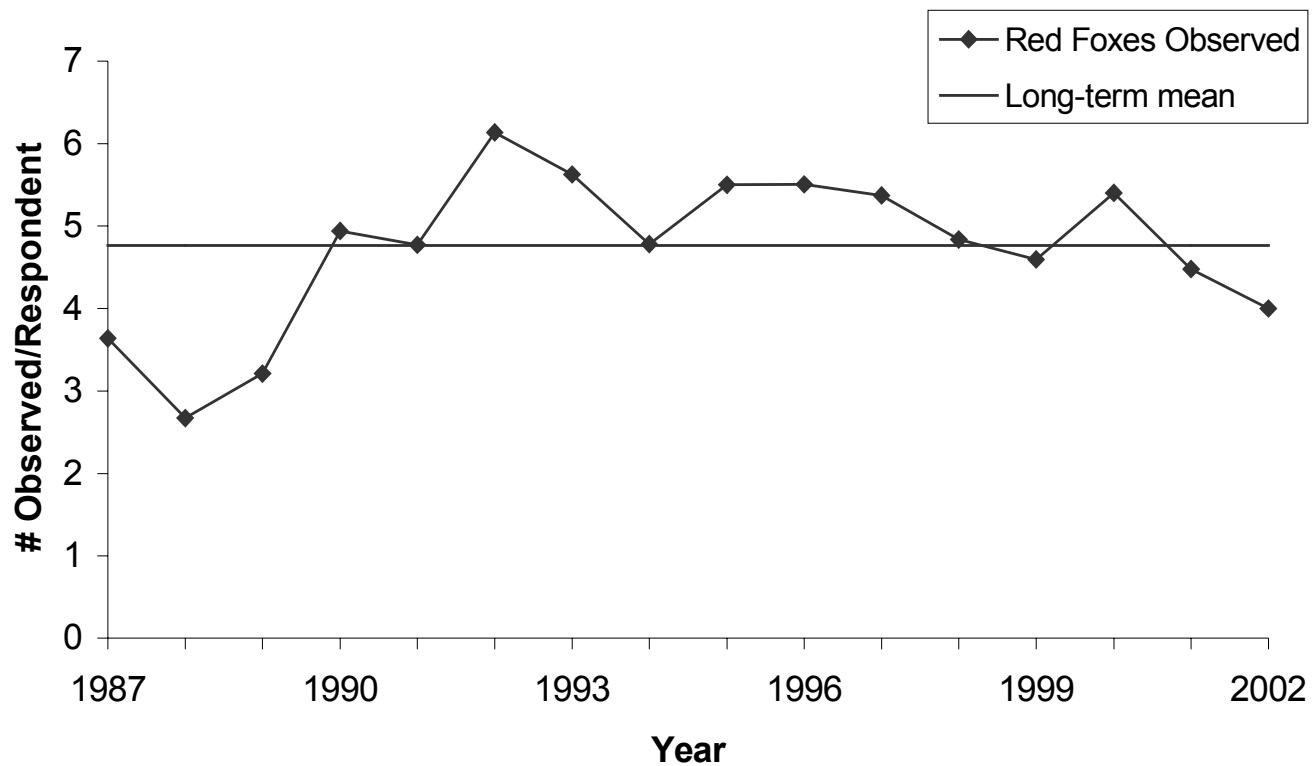
Figure 8. Number of gray wolves seen per respondent 1997-2002.



**Figure 9.** Number of jack rabbits seen per respondent 1987-2002.



**Figure 10.** Number of otters seen per respondent 1987-2002.



**Figure 11.** *Number of red foxes seen per respondent 1987-2002.*